

Claims

We Claim:

1. A shrink sleeve for heat shrinking over an asymmetrically contoured article, the sleeve made of a preferentially orientated film and comprising:
an open bottom defining a vertical bottom axis and an open top defining a vertical top axis, the top axis offset transversely from the bottom axis.
2. The shrink sleeve of claim 1 comprising a contoured side seam defining a contoured shape portion when the sleeve is in a lay-flat condition, the contoured shape portion disposed between the open top and the open bottom and comprising a non-uniform lay-flat width.
3. The shrink sleeve of claim 1 wherein the contoured shape portion comprises a concave-shaped portion.
4. The shrink sleeve of claim 1 wherein the contoured shape portion comprises a convex-shaped portion.
5. The shrink sleeve of claim 1 wherein the contoured shape portion comprises a convex-shaped portion and a concave-shaped portion.
6. The shrink sleeve of claim 1 wherein the shrink sleeve comprises a first side in a lay-flat condition, the first side having a vertical portion and an angled portion disposed between the vertical portion and the open top, the angled portion forming an obtuse angle with the vertical portion.
7. The shrink sleeve of claim 2 wherein the contoured shape portion comprises a printed surface.

8. The shrink sleeve of claim 7 wherein the printed surface comprises graphics.
9. The shrink sleeve of claim 8 wherein the film is made of a shrink material selected from the group of PVC, PE, PETG, OPETE and OPS.
10. A shrink sleeve for use with a contoured article, the contoured article comprising a maximum transverse circumference in a sleeve coverable portion of the article and a minimum transverse circumference in the sleeve coverable portion, the maximum circumference in the sleeve coverable portion divided by the minimum circumference in the sleeve coverable portion defining a article circumference ratio greater than 1.0, the sleeve made of a preferentially orientated shrink film comprising a transverse shrink ratio defined by the before-shrunk dimension of the film divided by the free-shrunk dimension in the orientated direction and:
a contoured side seam defining a contoured shape portion when the sleeve is in a lay-flat condition, the contoured shape portion disposed between an open top and an open bottom, the shrink sleeve comprising a maximum transverse circumference and a minimum transverse circumference, the maximum circumference of the sleeve divided by the minimum circumference of the sleeve defining a sleeve circumference ratio greater than 1.0;
wherein the shrink ratio of the film is less than the article circumference ratio.
11. The shrink sleeve of claim 10 wherein the contoured shape portion comprises a printed surface portion.
12. The shrink sleeve of claim 11 wherein the printed surface portion comprises graphics.
13. The shrink sleeve of claim 12 wherein the printed surface portion comprises text.
14. The shrink sleeve of claim 10 wherein the article circumference ratio is greater than 4.0.

15. The shrink sleeve of claim 10 wherein the article circumference ratio is greater than 6.0.

16. The shrink sleeve of claim 10 wherein the article circumference ratio is greater than 8.0.

17. The shrink sleeve of claim 10 wherein the sleeve circumference ratio is greater than 2.0.

18. The shrink sleeve of claim 10 wherein the article circumference ratio is greater than 4.0 and the film shrink ratio is less than 2.0.

19. A method of reducing print distortion on a shrink sleeve for a contoured shape article, the method comprising the steps of:
printing a preferentially orientated film to define a printed surface portion in the film,
forming a seal on the shrink film to define a sleeve, the sleeve comprising a contoured shape portion when the sleeve is in a lay-flat condition, the contoured shape portion disposed between a top and a bottom of the sleeve and comprising a non-uniform lay-flat width corresponding to a contour of the contoured shape article, at least a portion of the printed surface being on the contoured shape portion.

20. The method of claim 14 wherein the printed surface portion comprises graphics.

21. The method of claim 15 comprising the additional step of:
inserting the sleeve on the contoured shape article.

22. The method of claim 16 comprising the additional step of:
heat-shrinking the sleeve onto the contoured shape article.

23. A shrink sleeve for use with a contoured article, the sleeve made of a preferentially orientated shrink film and comprising:

a top portion comprising a maximum upper transverse circumference;

a bottom portion comprising a maximum lower transverse circumference;

a contoured seam portion defining a reduced circumference portion comprising a minimum circumference less than either of the maximum upper circumference and the maximum lower circumference, the reduced circumference portion disposed between the top portion and the bottom portion.

24. The shrink sleeve of claim 23 wherein the preferentially orientated film comprises shrink ratio at least equal to the ratio of the lesser of the maximum top lay flat width and the maximum bottom lay flat width to the minimum lay flat width.

25. The shrink sleeve of claim 23 wherein the reduced circumference portion comprises printed graphics.

26. A method of reducing the shrink ratio of a shrink sleeve film for use with a contoured shape article, the method comprising the steps of:

forming a seal on the shrink film to define a sleeve, the seal defining a contoured shape portion when the sleeve is in a lay-flat condition, the contoured shape portion disposed between a top and a bottom of the sleeve and comprising a non-uniform lay-flat width corresponding to a contour of the contoured shape article;

selecting a shrink ratio of the shrink sleeve film to be less than an article circumference ratio defined as the maximum transverse circumference in a sleeve coverable portion of the article divided by a minimum transverse circumference in the sleeve coverable portion.